

PATENT ASSIGNEE: Interbrew

PATENT: EP 941304 A1

PATENT: WO 9818902 DATE: 19980507

PRIORITY APPLICATION DATE: 19961031

DESIGNATED STATES:

See published patent document for Designated Contracting States.

X-REFERENCE: ALCOHOLIC BEVERAGES

LANGUAGE: French

SUMMARY LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 20000128

ABSTRACT: The invention relates to a fermented beverage based on beer wort, which contains a natural or synthetic additive designed to improve haze stability. The additive can form at least temporarily stable complexes with the protein fractions of the wort or the beverage, or it can form a suspension that is at least temporarily stable in the wort or beverage. The additive can comprise one or more polysaccharides, e.g., starch or cellulose derivatives, pectin, or pectin derivatives, especially E440.

SECTION HEADING: BEVERAGES

DESCRIPTORS: ADDITIVES; ALCOHOLIC BEVERAGES; BEER; BEVERAGES; EUROPEAN PATENT; HAZE; PATENT; STABILIZATION; STABILIZERS; WORT

2/9/35 (Item 4 from file: 53)

DIALOG(R) File 53:FOODLINE(R): Food Science & Technology

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00611431 FOODLINE ACCESSION NUMBER: 327892

Influence of feeding pumps on filtration.

Berdelle-Hilge P

Internationale Zeitschrift fur Lebensmittel-Technik, Marketing, Verpackung und Analytik 44 (10), 595-596+598 (0 ref.)

1993

LANGUAGE: German

SUMMARY LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19931105

ABSTRACT: The filtering of beer, wine, pectin preparations, plant extracts, etc., involves the removal of extremely small particles, such as yeast cells, proteins, bacteria, sugar molecules and the like. The filters used are designed according to the size of particles that need to be separated. If these particles are reduced in size, they clog the filter and reduce performance. This article examines the factors that contribute to particle-size reduction (shear, frictional forces and velocity gradients) and discusses means of improving the design of filter-feeding pump systems. Reference is made to the Hilge-Tronic system.

SECTION HEADING: EQUIPMENT

DESCRIPTORS: BEER; BEVERAGES; BREWERY EQUIPMENT; DESIGN; EFFICIENCY; EQUIPMENT; FILTERS; FILTRATION; FILTRATION EQUIPMENT; IMPROVEMENT; INCREASE; PERFORMANCE; PUMPS

2/9/37 (Item 6 from file: 53)

DIALOG(R) File 53:FOODLINE(R): Food Science & Technology

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00272072 FOODLINE ACCESSION NUMBER: 284822

Membrane separations in food processing.

Kosikowski F V

Membrane separations in biotechnology. 201-54 (32 ref.)

McGregor W C

PUBLISHER: Dekker, New York

GENERAL DESCRIPTORS: Beverages alcoholic; Carbohydrates; Additives
SECTION HEADINGS: Alcoholic & non-alcoholic beverages (SC=h)

2/9/25 (Item 12 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs
(c) 2000 FSTA IFIS Publishing. All rts. reserv.

00188037 80-07-h1111 SUBFILE: FSTA

(Method of producing beer.)

Shkop, Ya. F.; Bukovskii, P. I.; Lerner, I. G.; Shvyrkova, O. A.;
Gavrilova, Yu. D.

Union of Soviet Socialist Republics--Nauchno-proizvodstvennoe
Ob''edinenie Pivobezalkogol'noi Promyshlennosti

PATENT CO.: USSR Patent 1979

PATENT NO.: 685 689

DOCUMENT TYPE: Patent

LANGUAGE: Russian

Malt is crushed, mixed with water and saccharified. The wort is separated from the residue, boiled with hops, clarified, fermented and matured. Foaming substances are added before boiling and consist of aqueous extracts of malted barley roots and beet pectin in amounts of 0.02-0.08 and 0.005-0.01 g/l wort, resp. (W&Co)

DESCRIPTORS: Brewing--beer, brewing of, Patent; Beer--brewing of beer, Patent

SECTION HEADINGS: Alcoholic & non-alcoholic beverages (SC=h)

2/9/29 (Item 16 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs
(c) 2000 FSTA IFIS Publishing. All rts. reserv.

00070574 73-10-h1452 SUBFILE: FSTA

(Degradation of pectin compounds by yeasts of the genus Saccharomyces.)

Abbau von Pectinstoffen durch Hefen der Gattung Saccharomyces.

Dechau, P.; Emeis, C. C.

Biol. Lab., Versuchs- und Lehranstalt fuer Brauerei, Berlin, Federal Republic of Germany

Monatsschrift fuer Brauerei 1973 , 26 (6) 125-131

NOTE: 11 ref.

DOCUMENT TYPE: Journal Article

LANGUAGE: German SUMMARY LANGUAGE: English; French

A series of investigations into the pectinase (i) activity of yeasts is described. A screening test on sodium pectate medium was found to be suitable for identification of (i)-forming strains. Trials with 351 isolates of Saccharomyces spp. showed that 123 of 135 strains of Sacc. uvarum, 93 of 153 strains of Sacc. cerevisiae and 52 of 63 strains of Sacc. cerevisiae var. ellipsoideus formed (i). Further trials with 155 brewer's yeast isolates showed that practically all bottom-fermenting yeast formed (i), whereas only a few top-fermenting strains were pectolytic. A viscometric method for determination of pectolytic activity in beer and culture solutions was developed; trials with 7 bottled beers showed that unpasteurized bottom-fermented beers generally contain (i). (TUB-IGB)

DESCRIPTORS: yeasts (brewers)--pectinase activity of brewers' yeasts

SECTION HEADINGS: Alcoholic & non-alcoholic beverages (SC=h)

2/9/32 (Item 1 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
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00831909 FOODLINE ACCESSION NUMBER: 512756

Fermented beverage with beer wort base, method for preparing same.

Malcorps P; Dupire S; van den Eynde E

? t /9/6,15,25,29,32,35,37

2/9/6 (Item 6 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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02843088 BIOSIS NO.: 000019013706

HYDROLYTIC ENZYMES OF BREWERS YEAST DURING PRIMARY FERMENTATION

AUTHOR: KASIMOV M S; ABDURAZAKOVA S KH; ARSLANBEKOVA I G

AUTHOR ADDRESS: TASHK. POLYTECH. INST., TASHKENT, USSR.

JOURNAL: APPL BIOCHEM MICROBIOL (ENGL TRANSL PRIKL BIOKHIM MIKROBIOL) 15 (3). 1979 (RECD. 1980). 302-304.

FULL JOURNAL NAME: Applied Biochemistry and Microbiology (English Translation of Prikladnaya Biokhimiya i Mikrobiologiya)

CODEN: APBMA

RECORD TYPE: Citation

LANGUAGE: ENGLISH

DESCRIPTORS: PROTEINASE PEPTIDASE PECTIN ESTERASE POLY GALACTURONASE BEER WORT

CONCEPT CODES:

10802 Enzymes-General and Comparative Studies; Coenzymes
10808 Enzymes-Physiological Studies
13512 Food Technology-Malts, Brews and Other Fermentation Products
13532 Food Technology-Preparation, Processing and Storage (1970-)
39003 Food and Industrial Microbiology-Food and Beverage Fermentation (1970-)
51518 Plant Physiology, Biochemistry and Biophysics-Enzymes
10010 Comparative Biochemistry, General
10054 Biochemical Methods-Proteins, Peptides and Amino Acids
10064 Biochemical Studies-Proteins, Peptides and Amino Acids
10804 Enzymes-Methods
32000 Microbiological Apparatus, Methods and Media

BIOSYSTEMATIC CODES:

15100 Ascomycetes

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Microorganisms
Plants
Nonvascular Plants
Fungi

2/9/15 (Item 2 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00743535 97-09-h0247 SUBFILE: FSTA

(Pectins for foam stabilization of drinks with a foam head.)

Wubben, M. A.; Doderer, A.

Heineken Technical Services BV

PATENT CO.: Netherlands Patent Application 1996

PATENT NO.: NL 94 01 273

NOTE: NL 9401273 (940804) (Heineken Technical Services, Amsterdam, Netherlands)

DOCUMENT TYPE: Patent

LANGUAGE: Dutch

A pectin for foam stabilization of drinks (e.g. beer, especially pils) with a foam head is described. The pectin does not have a negative effect on beer flavour. Preferably the pectins are obtained from hop cones or stalks. A method for obtaining the pectins and for stabilization of drinks with the pectins is presented. (From summ.) (VJP)

DESCRIPTORS (HEADINGS): Foams; Pectic substances; Stabilizers; Patents; Beer

DESCRIPTORS: PECTINS

00079761 74-05-h0711 SUBFILE: FSTA

Observations on factors affecting beer foam characteristics.

Archibald, H. W.; Weiner, J. P.; Taylor, L.

Courage Ltd., London, UK

Proceedings, European Brewery Convention 1973/publ. 1974 , 14th Congress , 349-362

NOTE: 20 ref.

DOCUMENT TYPE: Journal Article

LANGUAGE: English SUMMARY LANGUAGE: German; French

Characteristics of beer foam, with emphasis on foam adhesion, were investigated. Laboratory work confirmed that unhopped beers possess adequate foam stability but adhesion is virtually absent. Addition of iso-ALPHA-acid as isomerized extracts to unhopped beer confers adhesion. Co and Ni ions strongly enhance adhesion in hopped beers. Other compounds proposed as foam improvers, e.g. alginate esters, **gum** acacia, had limited effect when added to normal beers. Addition of iso-ALPHA-acids to dilute unhopped worts did not confer adhesion unless ethanol was also added at normal beer levels. This suggests that ethanol positively contributes to foam quality. In the pilot brewery it was shown that boiling wort results in loss of foam-stabilizing materials. This loss is enhanced if water-soluble hop materials are present. Best stabilities were obtained when wort boil was replaced by holding at 85 DEGREE C. On the other hand, adhesion appears to be more dependent on hopping technique than on wort heat treatment. Compared with normal hopping, use of isomerized extracts to produce 50% of bitterness requirement gives beers with improved adhesion. Best adhesion was obtained when hop-base extract fraction was added to wort boil and an isomerized extract to fermented beer to provide required total bitterness. When **hops** are used conventionally, quality of foam is limited by 2 opposing effects. Prolonged boiling leads to loss of foam-stabilizing substances from wort, but restricted boil leads to inefficient extraction and conversion of foam-enhancing hop resins. Current commercial availability of hop preparations designed for addition at different stages of brewing should allow brewers to improve foam quality by avoiding these restrictions. (AS)

DESCRIPTORS: foams--beer, foam stability of; stability--beer, foam stability of; foams--beer, foam adhesion of; adhesion--beer, foam adhesion of; worts--beer, wort boil & foam stability of; boiling--beer, wort boil & foam stability of; **hops**--beer, hop extracts & foam adhesion of; extracts--beer, hop extracts & foam adhesion of; humulones--beer, iso-ALPHA-acid & foam adhesion of; alginates--beer, alginate esters & foam adhesion of; esters--beer, alginate esters & foam adhesion of; gums--beer, **gum** acacia & foam adhesion of; ethyl alcohol--beer, ethyl alcohol & foam adhesion of; beer (manufacture)--foam characteristics of beer

SECTION HEADINGS: Alcoholic & non-alcoholic beverages (SC=h)

4/9/1 (Item 1 from file: 10)
DIALOG(R)File 10:AGRICOLA
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3703452 21806767 Holding Library: AGL
Capillary electrophoresis studies of pectins
Zhong, H.J. Williams, M.A.K.; Goodall, D.M.; Hansen, M.E.
The University of York, York, UK.
Oxford : Elsevier Science Ltd.
Carbohydrate research. Mar 1998. v. 308 (1/2) p. 1-8.
ISSN: 0008-6215 CODEN: CRBRAT
DNAL CALL NO: 385 C172
Language: English
Includes references
Place of Publication: England
Subfile: IND; OTHER FOREIGN;
Document Type: Article
Capillary electrophoresis (CE) has been used to study a variety of pectins that originate from different sources (citrus, apple and **beet**) and have different **anhydrogalacturonic** acid (**AGU**) contents (86.2-63.2%). This CE method can be used for the quantitative detection of aqueous solutions of pectins in the concentration range 0.5 mg mL⁻¹ using a 50 mM pH 7.0 phosphate background electrolyte and UV detection at 192 nm. Using lemon pectin calibration standards in the degree of esterification (DE) range 31.1-75.8%, the technique was used to determine the DE of a further 11 pectin samples. Results are shown to be in excellent agreement with those obtained by titration, irrespective of the pectin type and neutral sugar content. The method also allows determination of the intermolecular DE distribution (variation in DE between molecules), from the CE peak shape. Results for the DE distribution are compared with those obtained by ion-exchange chromatography in combination with size-exclusion chromatography (IEC-SEC). Both DE and DE distribution are obtained from CE in approximately 2h, inclusive of sample preparation and calibration, in contrast to 2 days for the IEC-SEC method.
DESCRIPTORS: citrus - apples - **beets** - pectins - esterification - separation;
Section Headings: Q505 FOOD COMPOSITION-HORTICULTURAL CROP PRODUCTS

4/9/2 (Item 1 from file: 53)
DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
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00130392 FOODLINE ACCESSION NUMBER: 122192
Pectic substances in raw and cooked, fresh or processed Spanish vegetables.
Vidal-Valverde C; Lopez M P; Rojas-Hidalgo E
Journal of Agricultural and Food Chemistry 31 (5), 949-53 (27 ref.)
1983
LANGUAGE: English
DOCUMENT TYPE: Journal article
FOODLINE UPDATE CODE: 19840105
ABSTRACT: A method is presented which examines raw, cooked, frozen and canned vegetables for the content of pectic substances.
Anhydrogalacturonic acid in each sample was measured colorimetrically. The pectic substance content ranged between 0.19% in mushroom and 2.52% in potato.
DESCRIPTORS: **ANHYDROGALACTURONIC** ACID; ARTICHOKE; ASPARAGUS;

AUBERGINES; BEANS; **BEETROOT**; BELL PEPPERS; BROAD BEANS;
CABBAGES; CANNED; CANNED ASPARAGUS; CANNED BEANS; CANNED CARROTS;
CANNED MUSHROOMS; CANNED PEAS; CANNED POTATOES; CANNED SPINACH;
CANNED TOMATOES; CANNED VEGETABLES; CAPSICUM PEPPERS; CARDOON;
CARROTS; CAULIFLOWERS; CHARD; COLORIMETRY; COMPOUNDS; COOKING;
CUCUMBERS; DETERMINATION; ESCAROLE; FRIED; FRIED POTATOES; FRIED
VEGETABLES; FROZEN; FROZEN BEANS; FROZEN CARROTS; FROZEN PEAS;
FROZEN POTATOES; FROZEN SPINACH; FROZEN SPROUTS; FROZEN VEGETABLES;
GREEN BEANS; GREEN PEPPERS; LEEKS; LETTUCES; MUSHROOMS; ONIONS;
PEAS; PECTIC COMPOUNDS; PECTINS; PEPPER; PHOTOMETRY;
POLYSACCHARIDES; POTATOES; PROCESSING; QUANTITY; RADISHES;
SPECTROSCOPY; SPINACH; SPROUTS; TOMATOES; TURNIPS; VEGETABLE
SQUASHES; VEGETABLES